

Remarks

1. History through the Advisory Action to the root application

Claims 20-41 are in the present application. The amendments taken to the claims (1) are supported by the specification, and (2) are not primarily intended to add patentable distinction to the claims, but only to more accurately, succinctly and distinctly claim Applicant's invention (but claim 39 is arguably more patentably distinct after amendment).

Applicant will hereinafter argue that issues raised in the Advisory Action are moot in consideration of arguments made below as to the patentability of the pending claims. However, to show that Applicant recognizes the reasons stated by the Examiner for continuing his rejections, Applicant understands the Examiner to say:

(1a) Applicant relies on features such as "generating and rendering a perspective view image in a powerful computer such as a supercomputer", and that (1b) these features are not within Applicant's represented claims;

(2a) Applicant relies on argument that camera position is not communicated to a second, server, computer in Smith, and (2b) the Examiner disagrees, finding that the camera location in Smith may be imputed from the image; and/or

(3a) Applicant argues that "Smith does not show rendering from a single camera position a photorealistic image" while (3b) the Examiner finds oppositely.

[As a moot point, but for the record, Applicant now agrees that the Examiner is correct on his points 3(a)-3(b). Due to error in the Office Action being responded to as to the NUMBER of the patent of Smith, the NUMBER of the patent of Bourdelais being instead given, Applicant inadvertently argued a distinction of a property of his invention over the reference art of Bourdelaise, and NOT, as would have been appropriate, the reference art of Smith. The Examiner is correct as regards the showing of Smith.]

2. Argument as to the Patentability of the Claims as presently presented

Applicant now argues the patentable distinction of his invention as presently claimed.

Applicant clearly claims:

(4) "producing or selecting at a first computer upon digital communications network,,,,; transmitting from the first computer upon the digital communications network....; receiving at another computer upon the digital communications network...." (claim 20)

or, alternatively, and by way of further example,

(5) "rendering at a first computer, communicative upon a digital communications network,,,,;communicating from the first computer upon the digital communications network... to a second computer...; [and] rendering at the second computer". (Claim 23)

Still other independent claims 32, 33, and 37-40 claim likewise, to wit: rendering an image by information interchange between BOTH a first, and a second, computer that are communicative upon a digital communications network.

The reference patent of Smith neither teaches nor suggests a communications network. In fact Smith teaches a graphical user interface (GUI) while Applicant teaches a NETWORKED method and system of image rendering. In Smith all image generation -- "rendering" if done for such 3D images as Smith does NOT teach but DOES suggest -- is done in a SINGLE computer. This deficiency of Smith to teach or suggest NETWORKED image rendering is not overcome by any of the art of reference in any combination.

For example, and as the Examiner points out, his rejection of claims 20-41 is under 35 U.S.C. 103 and is based on a COMBINATION of references, namely (when the erroneous number reference to the Smith patent is corrected), the "reference art patent no. [6.052,669] of Smith, et al., in view of the prior art paper of Technicon Inc. [hereinafter "Technicon"] .

The Technicon and SolidWorks references appear to describe what is commonly referred to as a Web3D system, where small models are downloaded to the client and rendered in real-time on the client. This is very, very different from the image rendering method and system claimed by Applicant where

image rendering is done on a server, or second, computer..

Moreover, and furthermore, as the Examiner may recall the prior art system of Bordelais -- also of reference -- relies entirely on 2D images and has nothing to do with 3D models.

The Examiner is reminded that a first patent to Applicant has now issued as U.S. no. 7,062,772 and its claims -- although not deterministic of the allowability of the claims presently presented -- should be accorded due weight. Applicant's claimed invention for a method of distributed rendering of a 3D photorealistic image upon a network was not found during examination of the predecessor application and, with all due respect, the claimed invention of the present application likewise incorporates this feature, and is likewise neither taught nor suggested by the prior art of reference taken in any combination.

For edification of the Examiner, the purpose of the present, related, C-I-P application is simply to extend the concepts taught in the first application. Two key concepts are added.

The first is that the scene need not be communicated from the client to the server in 2D (plan view) form, and then translated to 3D at the server using object based-rules (chairs sit on the floor). Instead, small (light, i.e. low polygon count) "proxy" or "stand-in" models and textures can be placed in a 3D scene on the client and rendered in realtime for the purpose of specifying the scene, and previewing the final rendering. Then, this information is transmitted to the server, where the big high-res models and textures are substituted, and a high-res 2D or 3D image is rendered entirely from 3D elements residing on the server, and the image is returned to the client for viewing.

In contrast, Web3D applications such are taught in the Tecnicon reference render a final image on the client for display to the user -- not for the purpose of specifying a scene to a ray-tracing rendering system on a remote server! Web3D systems download small models from the server, for rendering on the client. Applicant teaches that the small models may be resident on the client at the start of the session.

Applicant's presently-presented claims may thus be seen to focus on two concepts
WITHIN APPLICANT'S (ALREADY PATENTED) BROADER SCHEME OF NETWORK-

BASED IMAGE RENDERING: (1) the use of proxy or stand-in models on the client, and (2) the concept of quickly rendering the stand-ins on the client for the purpose of specifying the scene to the server, and then previewing the rendering on the client before a final server-rendering request is made. .

3. Concluding Remarks

Applicant's undersigned attorney is at the Examiner's and/or the Petitions Examiner's disposal should either wish to discuss any matter which might expedite prosecution of this case. Please continue to note the revised e-mail address, and please note the NEW telephone number, below of Applicant's undersigned representative.

Sincerely yours,



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ABSTRACT

A ~~D~~esign professional such as an interior designer, furniture sales associate or advertising designer or a consumer running a program at a client computer (i) interactively selects or specifies a background scene and furnishings or other objects, (ii) interactively previews these objects in a small low-quality perspective view image of athe scene, and then (iii) ~~uses~~ utilizing the world wide web to connect to atransmits the scene file to a server computer, (iv) this server ~~or a like powerful computer then~~ renders a typically larger high-quality version of the previewed scene, utilizing high-resolution objects to replace the stand-in objects used to render the preview image on the client computer, (v) ~~which high-quality scene image is returned this image to the client computer for viewing.~~ 3D models and related textures and maps are built for each object to be depicted in the virtual scenes. For transmission efficiency, the scene file transmitted to the server may contain only the name of stand-in models and textures used in the scene, rather than the actual geometry and maps, as if these ~~may~~ reside on the server. Images ~~cost-effectively~~so produced serve to promote the sale of visually-attractive goods depicted by providing the designer and ~~customer~~consumer with in-context visualization.